



Empire District Electric Company
Electric Generation and Emissions in 2011

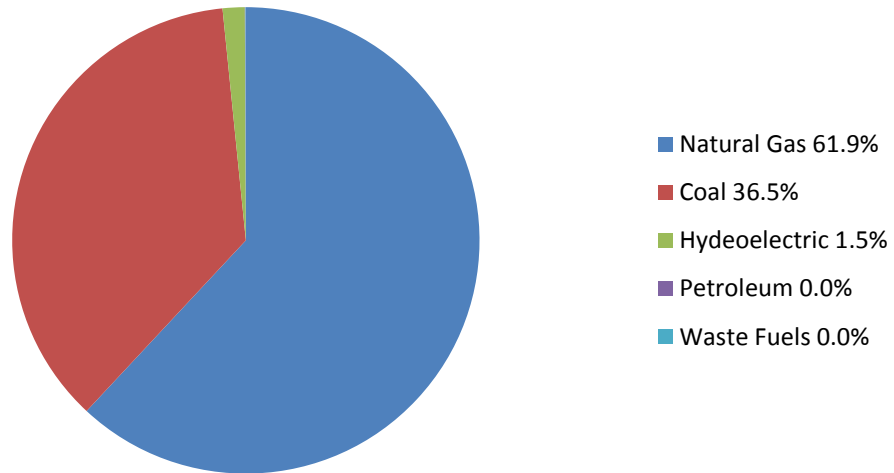
Generation Tables

	Fuel Consumption, MMBTUs	Percent of Total		Net Electric Power Generated, MWh	Percent of Total	
Non-renewable sources						
Coal	13,081,770	46.6%	45.8%	1,169,417	37.0%	36.5%
Natural Gas	14,953,124	53.3%	52.4%	1,986,164	62.9%	61.9%
Petroleum	14,943	0.1%	0.1%	1,212	0.0%	0.0%
Nuclear						
Other						
Non-renewable total	28,049,837	100.0%	98.3%	3,156,793	100.0%	98.4%
Renewable sources						
Biomass						
Hydroelectric	475,190	97.6%	1.7%	48,908	97.8%	1.5%
Landfill Gas						
Solar						
Waste Fuels	11,900	2.4%	0.0%	1,083	2.2%	0.0%
Wind						
Wood						
Renewable total	487,090	100.0%	1.7%	49,991	100.0%	1.6%
Grand total	28,536,927		100.0%	3,206,784		100.0%

Fuel Type	Physical Units	Number of Units
Anthracite Coal and Bituminous Coal	Short Tons	93,020
Sub-bituminous Coal	Short Tons	633,768
Natural Gas	MCf	14,509,801
Distillate Fuel Oil	Barrels	2,584
Hydroelectric	MMBTU	475,190
Tire-derived Fuels	Short Tons	425



Net Generation by Fuel Type, 2011 for Empire District Electric Company





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Power Plant Nameplate information for Empire District Electric Company

Plant Name	County Location	Nameplate Capacity (MW)
<i>Empire District Electric Company</i>		5,268.0
Asbury	Jasper	926.0
Empire Energy Center	Jasper	1,516.0
Ozark Beach	Taney	64.0
State Line Combined Cycle	Jasper	2,762.0



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Emissions from Electricity Generated in 2011: Empire District Electric Company

	CO2 Equivalent (TONS)	Carbon Dioxide (CO2) (TONS)	Methane (CH4) (TONS)	Nitrogen Dioxide (NO2) (TONS)
<i>Empire District Electric Company</i>	54,551,222	9,068,938	702,296	99,142
Asbury	47,620,406	5,571,718	636,302	92,537
Empire Energy Center	355,894	177,831	3,387	345
Ozark Beach	0	0	0	0
State Line Combined Cycle	6,574,922	3,319,390	62,606	6,261

	Sulfur Dioxide (SO2) (TONS)	Annual Nitrogen Oxide (NOx) (TONS)	Summer Nitrogen Oxide (NOx) (TONS)
<i>Empire District Electric Company</i>	21,930	0.0021	0.0019
Asbury	21,930	0.0019	0.0016
Empire Energy Center	0	0.0000	0.0000
Ozark Beach	0	0.0000	0.0000
State Line Combined Cycle	0	0.0002	0.0002



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Identified Flue Gas Desulfurization (FGD) controls installed on plants operated by Empire District Electric Company

Plant	Control Equipment	Sorbent Type
Asbury	Circulating Dry Scrubber	Lime

Identified Flue Gas Particulate (FGP) controls installed on plants operated by Empire District Electric Company

Plant	Control Equipment
Asbury	Baghouse, pulse
Asbury	Electrostatic precipitator, cold side, without flue gas conditioning

Notes:

Generation, emissions and pollution control data include power plants owned by the utility and located in Missouri.

Emissions data calculated by Missouri Department of Natural Resources, Division of Energy, from EIA Fuel Consumption Data

Fuel Consumption and Generation Data from United States Energy Information Administration, Form 923, United States Department of Energy
<http://www.eia.gov/electricity/data/eia923>

Pollution control data (FGD and FGP equipment) from United States Energy Information Administration, Form 860, United States Department of Energy
<http://www.eia.gov/electricity/data/eia860/index.html>

Emissions factors for fuel-based generation from United States Environmental Protection Agency "Emission Factors for Greenhouse Gas Inventories", November 7, 2011,
<http://www.epa.gov/climateleadership/documents/emission-factors.pdf>